

CLAIMS

I claim:

1. An immunophilin, comprising a protein with the following properties:

- (i) a protein of 8.4 kDa mass;
- (ii) isolated from the soluble cytoplasm of lymphoid tissues;
- (iii) the N-terminal first 23 amino acid sequence is:

MET GLN ILE PHE VAL LYS THR LEU THR GLY Seq. ID No. 1
LYS THR ILE THR LEU GLU VAL GLU PRO SER
ASP THR ILE

and,

- (iv) capable of specifically binding FK-506, rapamycin, or pharmacologically active metabolites or derivatives thereof, but not cyclosporins.

2. An immunophilin according to claim 1, wherein said protein exhibits retention times on HPLC identical to that of authentic ubiquitin.

3. An immunophilin according to claim 1, wherein said protein migrates on SDS-PAGE electrophoresis plates identically to authentic ubiquitin.

4. An immunophilin according to claim 1, wherein said protein exhibits a Kd of about 0.8 nM for FK-506 and 0.08 nM for rapamycin.

5. An immunophilin according to claim 1, wherein said protein has a Hill plot value of about unity.

6. An immunophilin according to claim 1, wherein said protein, and when complexed to FK-506, inhibits calcineurin phosphatase activity.

7. A recombinant 8.4 kDa immunophilin with the properties exhibited by the immunophilin according to claim 1.

8. A mercantile kit for the determination of immunosuppressant drugs FK-506, rapamycin and pharmacologically active metabolites and derivatives thereof in a fluid sample, comprising, in separate compartments: said isolated 8.4 kDa immunophilin; optionally, one or more of unlabeled said immunosuppressant drugs or pharmacologically-active metabolites or derivatives thereof; and, optionally, one or more labeled said immunosuppressant drugs or pharmacologically-active metabolites or derivatives thereof.